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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/658,185      | 09/09/2003  | Paul A. Underbrink   | SIRF.P230.US.C1     | 3355             |

32605 7590 10/06/2005

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EXAMINER

GELIN, JEAN ALLAND

ART UNIT PAPER NUMBER

2688

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/658,185

Applicant(s)

UNDERBRINK, PAUL A.

Examiner

Jean A. Gelin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is in response to the Applicant's amendments and arguments filed on July 07, 2005 in which claims 1-7 and 12 have been amended. Claims 1-26 are currently pending.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Krasner (US 5,841,396).

Regarding claim 1, Krasner teaches in figs. 1 and 6 a mobile communications device (20) comprising: a communications unit configured to receive communications data from a source, wherein the communications data includes a precision signal (i.e., modem 24 receives from source 16 data link which includes precision signal such as almanac, figs. 1A-1C, 6A); and a global positioning system (GPS) unit coupled to the communications unit (communication antenna and GPS antenna are coupled as one unit, 6A), wherein the GPS unit includes a PLL providing a reference signal phased-locked to the precision signal, the reference signal being provided to downconvert a GPS satellite signal (col. 3, lines 9-14, col. 12, line 46 to col. 13, line 16, the AFC may be implemented the PLL, col. 13, lines 26-35).

Regarding claim 2, Krasner teaches an automatic frequency control (AFC) element coupled to a communications antenna to receive a carrier signal wherein the AFC is configured to generate the precision signal as a signal locked (col. 12, lines 41-55, col. 13, lines 26-35).

Regarding claim 3, Krasner teaches in the phase-locked loop, a phase comparator that receives the precision signal and the reference signal and outputs an error control signal (col. 12, lines 56-67).

Regarding claim 4, Krasner teaches a voltage controlled oscillator configured to receive the error control signal and to output the reference signal (col. 12, lines 60-67).

Regarding claim 5, Krasner teaches a downconverter that receives the reference signal and the GPS satellite signal and outputs an intermediate frequency signal (col. 14, lines 10-24).

Regarding claim 6, Krasner teaches mobile global positioning system (GPS) device (figs. 6a-6c), comprising: a first antenna (613) for receiving reference signals (col. 3, lines 2-3, col. 12, line 66 to col. 13, line 1); a downconverter coupled to the first antenna, wherein the first antenna provides the GPS signals to the downconverter, wherein the downconverter includes an input for receiving a GPS clock signal to convert the GPS signals from a first frequency to a second frequency (col. 3, lines 2-3, col. 13, lines 13-14); a second antenna (601) for receiving a precision carrier frequency signal from a source (col. 3, lines 5-8, col. 12, lines 42-45); and an automatic frequency control (AFC) circuit coupled to the second antenna to receive the precision carrier frequency signal and configured to generate a reference signal related in frequency with the

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precision carrier frequency signal (col. 3, lines 9-14, col. 12, line 46 to col. 13, line 16); a PLL providing a reference signal phased-locked to the precision reference signal (col. 13, lines 26-35).

Regarding claim 7, Krasner teaches a phase comparator that receives the reference signal and an oscillator output signal and outputs a control signal to the oscillator that indicates an error in the oscillator output signal (col. 12, line 54 to col. 13, line 14).

Regarding claim 8, Krasner teaches a receiver coupled to the second antenna, wherein the receiver receives the precision carrier frequency signal, and further receives a data signal containing satellite data (col. 3, lines 5-14).

Regarding claim 9, Krasner teaches wherein the satellite data includes Doppler data related to a satellite in view of the receiver (col. 5, lines 34-46).

Regarding claim 10, Krasner teaches wherein the satellite data further includes an identification of a plurality of satellites in view of the receiver and a corresponding plurality of Doppler information related to the plurality of satellites (col. 5, lines 3-46).

Regarding claim 11, Krasner teaches wherein the satellite data further includes ephemeris data related to a satellite in view of the receiver (claim 4).

Regarding claim 12, Krasner teaches mobile communications device (figs. 1 and 6), comprising: a GPS antenna for receiving GPS signals (col. 3, lines 2-3, col. 12, line 66 to col. 13, line 1); a downconverter coupled to the GPS antenna, wherein the GPS antenna provides the GPS signals to the downconverter; and a communications unit, including, a communication antenna for receiving a precision carrier frequency signal

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from a source (col. 3, lines 1-16); and an automatic frequency control (AFC) circuit coupled to the communication antenna, wherein the AFC circuit provides a reference signal based on the precision carrier frequency signal (col. 12, line 56 to col. 13, line 14); and an oscillator coupled to downconverter, wherein the oscillator provides an oscillator phased-locked to the reference signal, the oscillator signal being provided to the downconverter to mix with GPS signals (fig. 6a, col. 12, line 56 to col. 13, line 14).

#### ***Allowable Subject Matter***

4. Claims 13-26 would be allowable upon entering the terminal disclaimer in the file to overcome the double patenting rejection..

#### ***Response to Arguments***

5. Applicant's arguments filed 7/22/05 have been fully considered but they are not persuasive.

The Applicant argues that Krasner's signal 612, generated by frequency synthesizer 609, is not disclosed to have any phase relationship with controlled signal LO. However, the Examiner disagrees with the preceding argument. Krasner teaches the AFC can be replaced PLL; thus the controlled signal has phase relationship with the frequency synthesizer. The rejection is maintained.

In the remark, the Applicant argues that he has filed a terminal disclaimer to overcome the double patent. However, the disclaimer has not been received. Therefore, the rejection is maintained.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**JEAN GELIN**  
**PRIMARY EXAMINER**

JGelin  
September 30, 2005

*Jean Allard Gelin*